

Lesotho - Urban & Peri-Urban Water, and Metolong Dam

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Overview

Identification

COUNTRY

Lesotho

EVALUATION TITLE

Urban & Peri-Urban Water, and Metolong Dam

EVALUATION TYPE

Independent Impact Evaluation

ID NUMBER

DDI-MCC-LSO-WASH-SI-MPUPUW-2018

Overview

ABSTRACT

This ex-post evaluation includes two primary components: a process evaluation and a summative evaluation. An evaluability assessment was also conducted to inform the process and summative evaluations. The process evaluation aimed to assess how the projects were implemented and managed, report on current functionality and use, and derive lessons learned that can be applied to future Compacts. It included two components: an implementation fidelity assessment and a performance evaluation. The implementation fidelity assessment relied on structured observations during site visits and key informant interviews with relevant stakeholders to assess the degree to which the program was implemented according to plan and report on current functionality and use of infrastructure. The performance evaluation used document review, site visits, and key informant interviews to characterize the management of assets funded by the program and the effect of the program on WASCO income and costs. The summative evaluation uses quasi-experimental matching approaches to identify impacts on households with improved access and improved supply in a select number of sites, and also includes a customer survey in other sites. Qualitative data collection and analysis of secondary quantitative data will also be used to measure the effect of the program on industry and enterprises in Maseru.

The evaluation questions to which this evaluation responds are:

1. Is the program evaluable?
2. Was the program implemented according to plan? Are interventions operating according to plan? If not, what are the major issues, and to what extent were they affected by implementation fidelity?
3. What is the current functionality, use, and plan for managing and maintaining the infrastructure under the Metolong Program and UPUW Activity?
4. To what extent has a management unit been established for the Semonkong water system? To what extent has WASCO HQ provided support to those managing the new system in Semonkong?
5. To what extent has support been provided to the Water and Sewerage Company (WASCO) for the management of Metolong Dam, Water Treatment Works, and Pump Stations? If provided, who provided it, when was it provided, and how effective has this support and dam management been? Does a staffing plan exist for Metolong Dam? To what extent are positions occupied and what has turnover been to-date?
6. Do Operations and Maintenance plans exist for the Metolong Program and UPUW assets? How are these plans budgeted and funded? Are these O&M plans being observed and carried out?
7. What were program results on key short-term and intermediate outcomes?
- 7a. To what extent has access to quality water increased? What activities, if any, has WASCO conducted to encourage households to connect to the network?
- 7b. To what extent are community members (including businesses such as manufacturing firms) using water from the urban water network and how has this changed since the Lesotho Compact started?

7c. To what extent are community members experiencing cost and time savings, or reductions in water-related illness?

7d. How have the MP and UPUW programs impacted WASCO's income and costs? Has additional income been generated that can be directed to maintaining the new infrastructure?

8. What lessons can MCC or the Government of Lesotho apply to future programs related to program design, implementation, and sustaining results?

Data collection for the process evaluation has been completed; data collection for the summative evaluation is planned for 2018. All results will be presented and published together in a single, final report.

EVALUATION METHODOLOGY

Ex-Post

UNITS OF ANALYSIS

For project impact: Households, industrial firms

For project implementation/performance: Each site where infrastructure works were completed under the Compact, water utility

KIND OF DATA

Sample survey data [ssd]

TOPICS

Topic	Vocabulary	URI
Lesotho		
Urban Water		
Impact Evaluation		
Process Evaluation		
Water, Sanitation, and Hygiene		

KEYWORDS

Lesotho, Water, Urban, Sub-Saharan Africa, Metolong Program, Urban and Peri-Urban Water Activity, Evaluation, WASH, Industry

Coverage

GEOGRAPHIC COVERAGE

The evaluation covers urban and peri-urban areas of Lesotho included in the UPUW Activity and MP under the MCC Lesotho Compact. Specifically, these areas include:

Package 1: Maseru, Mazenod, Roma, Morija, Teyateyaneng

Package 2: Semonkong

Package 3: Mafeteng, Mohale's Hoek, Quthing, Qacha's Nek

Package 4: Mokhotlong, Butha-Buthe, Leribe

Package 5: Mapoteng

UNIVERSE

Data collection on the following populations is planned but not yet completed. See Summative EDR for details regarding the design.

Household data file will include: households in each urban site, with population differing by site as follows:

--Maseru urban: Households connected to the network since before the interventions

--Maseru peri-urban & Teyateyaneng & Semonkong: Households connected after the interventions & households not connected to the network

--Other UPUW sites: Households connected to the network (regardless of whether before/after the interventions)

Other groups to which results refer (not included in data file):

--Industrial firms in the textile & garment industry based in Maseru (receiving supply from Metolong Water Treatment Works)

--Other commercial enterprises in Maseru connected to the WASCO network

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Social Impact, Inc.	

FUNDING

Name	Abbreviation	Role
Millennium Challenge Corporation	MCC	

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Millennium Challenge Corporation	MCC		Review of Metadata
Social Impact, Inc.	SI		Population of Metadata

DATE OF METADATA PRODUCTION

2018-07-12

DDI DOCUMENT VERSION

Version 1 (Original 2018-07-12): Includes only metadata relevant to the process and summative evaluation EDRs for this study. Will be updated for future evaluation data and deliverables.

DDI DOCUMENT ID

DDI-MCC-LSO-WASH-SI-MPUPUW-2018

MCC Compact and Program

COMPACT OR THRESHOLD

Lesotho Compact

PROGRAM

Lesotho's urban population has grown rapidly in recent decades, due in large part to job opportunities in the water-intensive textile and garment industry based in the capital of Maseru, as well as population growth and expansion of peri-urban areas. By 2008, domestic and industrial demand for water in urban areas was rising faster than the available supply. The combination of urbanization, growing demand, and aging infrastructure put strain on water networks in urban areas, resulting in declining reliability of piped water supply. Under these conditions, the utility (WASCO) was not able to expand to underserved urban and peri-urban areas. Further, a secure water supply was needed to attract new foreign direct investment in the textile and garment industry. In a Compact with the Government of Lesotho (GoL) implemented between 2008 and 2013, the Millennium Challenge Corporation (MCC) aimed to address these challenges through two major investments, including the Urban and Peri-Urban Water (UPUW) Activity and the Metolong Dam Program (MP). Taken together, the objective of the UPUW Activity & Metolong Program was to ensure an adequate and reliable supply of high-quality water in urban areas of Lesotho, for domestic, commercial, and industrial use. The UPUW Activity was

implemented in ten urban and peri-urban locations, each comprised of a tailored set of new or rehabilitated infrastructure. MCC co-financed the MP along with a consortium of other donors, to increase and provide a long-term, reliable bulk water supply to Maseru and surrounding areas.

MCC SECTOR

Water, Sanitation and Hygiene (WASH)

PROGRAM LOGIC

The Lesotho UPUW Activity and MP program logic contemplates outcomes related to four different populations: households, industry, small and medium enterprises (SMEs), and the urban water utility (WASCO). Households: Increasing the amount of water in an urban network, upgrading infrastructure, and improving and extending the network would lead to increases in access/coverage, reliability, and quality of water for households, was expected to result in time savings and reduced diarrheal illness, ultimately increasing the time and resources available for generating income. Industry: An increased supply of quality, reliable water was expected to result in expansion and growth of industrial firms, ultimately leading to more employment opportunities and greater production. SMEs: Increasing the amount of water in an urban network, upgrading infrastructure, and improving and extending the network was expected to increase the supply of quality, reliable water for urban SMEs, which would enjoy decreased manufacturing cost and/or increased manufacturing opportunities. These SMEs would, in theory, invest in productive capabilities because of improved access, reliability, and water quality. WASCO: Increased coverage and reliability was expected to result in greater cost recovery, which could be allocated to operations and maintenance (O&M) to maintain the new infrastructure.

PROGRAM PARTICIPANTS

The following entities were expected to benefit from the UPUW Activity and MP: 1. Households: Any household with a connection to WASCO, whether pre-existing or new in the ten UPUW sites 2. Industry: Owners and employees of firms located on the premises of the Tikoe or Thetsane industrial estates. Targeted industries were textile and garment firms. 3. SMEs: Owners and employees of any formal or informal SME with a connection to WASCO, whether pre-existing or new, in Maseru and surrounding areas. 4. Utility: The urban water utility, WASCO, which manages and operates networks across all of Lesotho, including in all ten UPUW sites.

Sampling

Study Population

Data collection on the following populations is planned but not yet completed. See Summative EDR for details regarding the design. Household data file will include: households in each urban site, with population differing by site as follows: --Maseru urban: Households connected to the network since before the interventions --Maseru peri-urban & Teyateyaneng & Semonkong: Households connected after the interventions & households not connected to the network --Other UPUW sites: Households connected to the network (regardless of whether before/after the interventions) Other groups to which results refer (not included in data file): --Industrial firms in the textile & garment industry based in Maseru (receiving supply from Metolong Water Treatment Works) --Other commercial enterprises in Maseru connected to the WASCO network

Sampling Procedure

Household surveys: the sampling will vary by site. In Maseru, SI will sample households connected to the network directly from the WASCO customer database, from two broad areas: areas of Maseru which have received new supply from the Metolong Water Treatment Works, and those which have not; using installation date, sampling will be limited to those households connected since prior to the interventions. In Maseru peri-urban sites as well as Teyateyaneng and Semonkong, SI will conduct a listing exercise and brief listing survey in enumeration areas where the WASCO network is available to identify households with and without connections, and for those with connections, verify dates of connection. From this listing, SI will sample households with and without connections to the network, who have resided in the study areas since prior to the interventions. For all other UPUW sites, SI will sample customers directly from the WASCO customer database. (See Summative EDR section 6.2.3 for additional detail). The sample design is subject to adjustment based on findings from qualitative data collection, to be conducted in mid-2018.

Focus groups: the sampling procedure was under development at the time the EDR was approved, though the likely approach will be to sample households based on proximity to a focal point in each relevant site. Participants will include women knowledgeable about water affairs in households.

Key informant interviews: Respondents will be selected purposively, including stakeholders knowledgeable about migrating and housing market dynamics in Lesotho.

Site visits: Industrial firms will be selected purposively from a list of all textile and garment firms located in the Maseru area.

Enterprises: WASCO data will be analyzed for all commercial enterprises in Maseru, i.e., no sampling will take place.

Questionnaires

Overview

- 1.) WASCO Staff Key Informant Interview (KII) Guides: Semi-structured interview guides customized by service area and role meant to understand deviations from plans, current functionality, and management procedures for works funded by the project. Implemented with WASCO headquarters staff, regional managers, area managers, and operators as well as technical staff at the Metolong Water Treatment Works.
- 2.) Structured Observation Protocol: Spreadsheet tool pre-populated with planned works and functionality at each site to which actual works and functionality were compared. Also classifies management, funding, and operations and maintenance at each site.
- 3.) Implementation Fidelity Scorecard: Spreadsheet in which each site is scored on the dimensions of fidelity in design, installation, management/operations and maintenance, and funding of works. These scores total to a weighted overall implementation fidelity score.
- 4.) Household Survey: Quantitative survey targeting outcomes of interest, matching variables, and covariates for household beneficiaries. Modules include demographic and socioeconomic information, water use, sanitation, water-related illness, and expenditure.
- 5.) Customer Survey: Quantitative survey targeting only outcomes of interest and covariates for household beneficiaries. Contains all modules of household survey except those used for matching.
- 6.) Household Focus Group Discussion (FGD) Guide: FGD guide meant to inform viability of quantitative design and help explain quantitative results. Topics include selection into treatment, experience of interventions, potential spillover effects, water, sanitation, and hygiene practices, potential bias and confounding factors, and outcomes of interest.
- 7.) Industry KII Guide: Semi-structured interview guide meant to characterize outcomes for industry-level beneficiaries including topics such as pre-Compact perceptions of water supply, industrial supply chain, current water usage, perceived impacts of the MP, and future expectations for industry.
- 8.) SME KII Guide: Semi-structured interview guide meant to characterize outcomes for SMEs including topics such as factors in and constraints to SME growth, SME usage of water, and future expectations for SMEs.
- 9.) Local Chief KII Guide: Semi-structured interview guide meant to characterize internal migration and housing market dynamics that could confound the viability of SI's experimental design.
- 10.) Lesotho Housing and Land Development Corporation KII Guide: Semi-structured interview guide meant to characterize internal migration and housing market dynamics that could confound the viability of SI's experimental design.

Data Collection

Data Collection Mode

In-person household surveys will take place later in 2018 in each UPUW site; household surveys will be conducted using tablets and electronic survey software. Focus groups and key informant interviews will be administered by a combination of SI's local data collection partner (TBD) and Social Impact.

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Data Processing

No content available

Data Appraisal

No content available